

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2380		SERIAL NO. <del>Unknown</del> 107655997	
LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT: Jon P. Daley			
				FILING DATE <del>Filed Herewith</del> 9/15/03		GROUP <del>Unknown</del> 2822	

U.S. PATENT DOCUMENTS							
Examiner's Initials	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
REP	AA	6,156,674	12/05/00	Li et al.			
REP	AB	6,281,100 B1	08/28/01	Ylin et al.			
REP	AC	6,291,363 B1	09/18/01	Yin et al.			
REP	AD	6,380,611 B1	04/30/02	Yin et al.			
REP	AE	6,383,723 B1	05/07/02	Iyer et al.			
REP	AF	10/177,056		Tran			06/21/2002
REP	AG	10/609,311		Yates			06/26/03
	AH						
	AI						

FOREIGN PATENT DOCUMENTS							
Document Number	Date	Country	Class	Subclass	Translation		
					Yes	No	
AJ							
AK							
AL							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)			
	AM		
	AN		
	AO		

EXAMINER 	DATE CONSIDERED 2/16/05
--------------	----------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2380	SERIAL NO. 10/655,997
<b>LIST OF ART CITED BY APPLICANT</b> (Use several sheets if necessary)				APPLICANT: Jon P. Daley	
				FILING DATE September 5, 2003	GROUP 2842 2822

OIP  
AUG 30 2004  
PATENT & TRADEMARK OFFICE

U.S. PATENT DOCUMENTS							
*Examiner's Initials	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
PEP	AA	4,086,074	04/78	Minot et al.			
PEP	AB	4,622,735	11/86	Shibata			
PEP	AC	4,683,645	08/87	Naguib et al.			
PEP	AD	4,693,910	09/87	Nakajima et al.			
PEP	AE	4,766,090	08/88	Coquin et al.			
PEP	AF	5,099,304	03/92	Takemura et al.			
PEP	AG	5,236,865	08/93	Sandhu et al.			
PEP	AH	5,444,024	08/95	Anjum et al.			
PEP	AI	5,470,784	11/95	Anjum et al.			

FOREIGN PATENT DOCUMENTS							
Document Number	Date	Country	Class	Subclass	Translation		
					Yes	No	
AJ							
AK							
AL							

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)		
PEP	AM	ABSTRACT: Basceri et al., Atomic Layer Deposition for Nanoscale CU Metalization, 10 pages (pre-April 2004).
PEP	AN	En et al., Plasma immersion ion implantation reactor design considerations for oxide charging, 85 SURFACE AND COATINGS TECHNOLOGY 64-69 (1966).
PEP	AO	Ku et al., The Application of Ion Beam Mixing, Doped Silicide, and Rapid Thermal Processing of Self-Aligned Silicide Technology, 137 J. Electrochem. Soc. No. 2, pp. 728-740 (February 1990).

EXAMINER 	DATE CONSIDERED 2/16/05
--------------	----------------------------

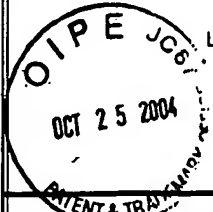
\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

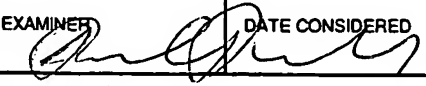
Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2380		SERIAL NO. 10/655,997		
LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT: Jon P. Daley				
				FILING DATE September 5, 2003		GROUP <del>2812</del> 2822		
<b>U.S. PATENT DOCUMENTS</b>								
*Examiner's Initials	AA	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate	
REP	AA	5,670,298	09/97	Hur				
REP	AB	6,037,239	03/00	Jennings				
REP	AC	6,096,621	08/00	Jennings				
REP	AD	6,130,140	10/00	Gonzalez				
REP	AE	6,133,105	10/00	Chen et al.				
REP	AF	6,133,116	10/00	Kim et al.				
REP	AG	6,177,235 B1	01/01	Francou et al.				
REP	AH	6,277,709 B1	08/01	Wang et al.				
REP	AJ	6,277,728 B1	08/01	Ahn et al.				
<b>FOREIGN PATENT DOCUMENTS</b>								
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AJ							
	AK							
	AL							
<b>OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)</b>								
REP	AM		ABSTRACT: How to Eliminate Volding in Porous-Low-k Dielectrics and The Mechanism of Vold Formation; Lin et al.; 4 pages					
REP	AN		COB Stack DRAM Cell Technology beyond 100 nm Technology Node; Yongjik Park & Kinam Kim; pp. 349.1 - 349.3;					
REP	AO		Rubin et al., Shallow-Junction Diode Formation by implantation of Arsenic and Boron Through Titanium-Silicide Films and ..., 17 IEEE Transactions on Electron Devices, No. 1, pp. 183-190 (January 1990).					
EXAMINER		DATE CONSIDERED						
		2/16/05						
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			ATTY. DOCKET NO. MI22-2380		SERIAL NO. 10/655,997	
LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)					APPLICANT: Jon P. Daley			
					FILING DATE September 5, 2003		GROUP 2012 2822	
U.S. PATENT DOCUMENTS								
*Examiner's Initials	AA	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
PEP	AA	6,440,793 B1	08/02	Divakaruni et al.				
PEP	AB	6,465,325 B2	10/02	Ridley et al.				
PEP	AC	6,720,638 B2	04/04	Tran				
	AD							
	AE							
	AF							
	AG							
	AH							
	AI							
FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation	
	AJ						Yes	No
	AK							
	AL							
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)								
	AM		/					
	AN							
	AO							
EXAMINER		DATE CONSIDERED						
/		2/16/05						
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								



Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2380	SERIAL NO. 10/655,997			
LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT: Jon P. Daley				
				FILING DATE September 5, 2003	GROUP 2812 <b>2822</b>			
<b>U.S. PATENT DOCUMENTS</b>								
*Examiner's Initials	Class	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate	
PEP	AA	2001/0006759 A1	07/01	Shipley, Jr. et al.				
PEP	AB	2002/0076879 A1	06/02	Lee et al.				
PEP	AC	2002/0196651 A1	12/02	Weis				
PEP	AD	2003/0013272 A1	01/03	Hong et al.				
	AE							
	AF							
	AG							
	AH							
	AI							
<b>FOREIGN PATENT DOCUMENTS</b>								
		Document Number	Date	Country	Class	Subclass	Translation	
	AJ						Yes	No
	AK							
	AL							
<b>OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)</b>								
	AM		/					
	AN							
	AO		/					
EXAMINER		DATE CONSIDERED <b>2/16/05</b>						
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2380		SERIAL NO. 10/655,997	
LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT: Jon P. Daley			
				FILING DATE September 5, 2003		GROUP 2812 2822	
<b>U.S. PATENT DOCUMENTS</b>							
*Examiner's Initials	AA	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
REP	AA	10/689,958		Basceri			10/03
REP	AB	10/690,029		Derderian et al.			10/03
REP	AC	10/882,118		Sandhu et al.			04/04
REP	AD	10/879,367		Blalock et al.			06/04
	AE						
	AF						
	AG						
	AH						
	AI						
<b>FOREIGN PATENT DOCUMENTS</b>							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes No
	AJ						
	AK						
	AL						
<b>OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	AM						
	AN						
	AO						
EXAMINER		DATE CONSIDERED					
P. Daley		2/16/05					
<small>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>							

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2380		SERIAL NO. 10/655,997	
<div style="float: left; width: 100px; text-align: center;">  </div> <div style="float: right; width: 80%;"> <b>LIST OF ART CITED BY APPLICANT</b>          (Use several sheets if necessary)       </div> <div style="clear: both;"></div>				APPLICANT: Jon P. Daley			
				FILING DATE September 5, 2003		GROUP 2812 <b>2822</b>	
<b>U.S. PATENT DOCUMENTS</b>							
*Examiner's Initials	AA	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
REP	AA	3,349,474	12/1963	D. H. Rauscher			
REP	AB	5,904,517	05/1999	Gardner et al.	438	197	
REP	AC	5,998,264	12/1999	Wu	438	260	
REP	AD	6,180,465 B1	01/2001	Gardner et al.	438	291	
REP	AE	6,207,485 B1	03/2001	Gardner et al.	438	216	
REP	AF	6,548,854 B1	04/2003	Kizilyalli et al.	257	310	
	AG						
REP	AH	2003/0045060 A1	03/2003	Ahn et al.	438	287	
REP	AI	2003/0045078 A1	03/2003	Ahn et al.	438	585	
<b>FOREIGN PATENT DOCUMENTS</b>							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes No
REP	AJ	EP 0 851 473 A2	01/1998	EPO			X
	AK						
	AL						
<b>OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)</b>							
REP	AM	Chang et al., Silicon surface treatments in advanced MOS gate processing, Microelectronic Engineering, (2004), pages 130-135					
REP	AN	Lemberger et al., Electrical characterization and reliability aspects of zirconium silicate films obtained from novel MOCVD precursors, Microelectronic Engineering (2004), pages 315-320					
REP	AO	Lu et al., Effects of the TaN <sub>x</sub> interface layer on doped tantalum oxide high- <i>k</i> films, VACUUM (2004), pages 1-9					
EXAMINER		DATE CONSIDERED					
		2/16/05					
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE			ATTY. DOCKET NO. MI22-2380		SERIAL NO. 10/655,997	
LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)					APPLICANT: Jon P. Daley			
					FILING DATE September 5, 2003		GROUP 2812 <b>2822</b>	
<b>U.S. PATENT DOCUMENTS</b>								
Examiner's Initials	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate		
	AA		/					
	AB							
	AC							
	AD							
	AE							
	AF							
	AG							
	AH							
	AI							
<b>FOREIGN PATENT DOCUMENTS</b>								
	Document Number	Date	Country	Class	Subclass	Translation		
						Yes	No	
	AJ		/					
	AK							
	AL							
<b>OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)</b>								
<b>REP</b>	AM		Robertson et al., Atomic structure, band offsets, growth and defects at high-K oxide:Si interfaces, Microelectronic Engineering (2004) pages 112-120					
<b>REP</b>	AN		Singh et al., High and Low Dielectric Constant Materials, The Electrochemical Society <i>Interface</i> , Summer 1999, pages 26-30					
	AO							
EXAMINER		DATE CONSIDERED						
		<b>2/16/05</b>						
<small>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>								



Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2380		SERIAL NO. 10/655,997	
				LIST OF ART CITED BY APPLICANT (Use several sheets if necessary)			
				APPLICANT: Jon P. Daley			
				FILING DATE September 5, 2003		GROUP 2842 <b>2822</b>	
<b>U.S. PATENT DOCUMENTS</b>							
*Examiner's Initials	AA	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
<b>PEP</b>		10/932,218		Basceri et al.			09/01/04
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
<b>FOREIGN PATENT DOCUMENTS</b>							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes No
	AJ						
	AK						
	AL						
<b>OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	AM						
	AN						
	AO						
EXAMINER		DATE CONSIDERED					
		2/16/05					
<small>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>							

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2380	SERIAL NO. 10/655,997		
<div style="display: flex; align-items: center;"> <div style="border: 2px solid black; border-radius: 50%; padding: 10px; margin-right: 10px; text-align: center;"> O I P E JCS DEC 27 2004 PATENT &amp; TRADEMARK OFFICE </div> <div> LIST OF ART CITED BY APPLICANT  (Use several sheets if necessary) </div> </div>				APPLICANT: Jon P. Daley			
				FILING DATE September 5, 2003	GROUP 2812 <b>2822</b>		
U.S. PATENT DOCUMENTS							
Examiner's Initials	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate	
PEP	AA	6,753,618	06/2004	Basceri et al.	257	915	
PEP	AB	5,470,794	11/1995	Anjum	437	200	
PEP	AC	2003/0219942 A1	11/2003	Choi et al.	438	253	
PEP	AD	2004/0245560 A1	12/2004	Pontoh et al.	257	309	
PEP	AE	2004/0245559 A1	12/2004	Pontoh et al.	257	306	
PEP	AF	2004/0046197 A1	03/2004	Basceri et al.	257	296	
PEP	AG	2004/0043228 A1	03/2004	Derderian et al.	428	446	
PEP	AH	2003/0213987 A1	11/2003	Basceri et al.	257	296	
PEP	AI	2003/0205729 A1	11/2003	Basceri et al.	257	200	
FOREIGN PATENT DOCUMENTS							
	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No
	AJ		/				
	AK						
	AL						
OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)							
	AM		/				
	AN						
	AO						
EXAMINER		DATE CONSIDERED					
		<b>7/16/05</b>					
<small>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>							